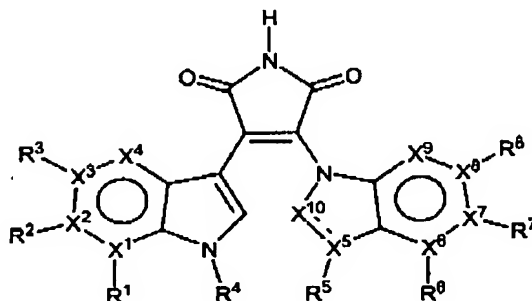


Amendments to the Claims:

This listing of claims replaces all prior versions of claims in the application

1. (currently amended) A compound represented by the following formula:



or a pharmaceutically acceptable salt thereof  
wherein:

$X^1 - X^3$  are independently C or N;

$X^4$  is CH or N, wherein not more than two of  $X^1 - X^4$  is N;

$X^6 - X^8$  are independently C or N;

$X^9$  is CH or N, wherein not more than two of  $X^6 - X^9$  is N;

$X^5$  is N,  $R^5$  is a lone pair, and  $X^{10}$  is CH, when the bond between  $X^5$  and  $X^{10}$  is a double bond; or

$X^5$  is CH,  $R^5$  is H, and  $X^{10}$  is  $CH_2$ , when the bond between  $X^5$  and  $X^{10}$  is a single bond; or

$X^5$  is C,  $R^5$  is defined below, and  $X^{10}$  is CH, when the bond between  $X^5$  and  $X^{10}$  is a double bond;

$R^1 - R^3$  and  $R^6 - R^8$  represent a lone pair or O when each respective  $X^1 - X^3$  and  $X^6 - X^8$  is N; or

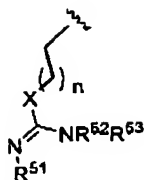
when  $X^1 - X^3$  or  $X^6 - X^8$  is C, each respective  $R^1 - R^3$  and  $R^6 - R^8$  is independently selected from the group consisting of:

- a) H, substituted or unsubstituted C(1-8) alkyl, halogen, azido, cyano, nitro, or  $\text{NR}^{21}\text{R}^{22}$ , wherein  $\text{R}^{21}$  represents H or C(1-8) alkyl, and  $\text{R}^{22}$  represents H, substituted or unsubstituted C(1-8) alkylcarbonyl, substituted or unsubstituted arylcarbonyl, heterocycle, substituted or unsubstituted heteroarylcarbonyl, substituted or unsubstituted C(1-8) alkylaminocarbonyl, substituted or unsubstituted arylaminocarbonyl;
- b)  $\text{OR}^{23}$ , wherein  $\text{R}^{23}$  is H, substituted or unsubstituted alkylcarbonyl, substituted or unsubstituted arylcarbonyl;
- c)  $\text{SR}^{23}$ , wherein  $\text{R}^{23}$  is defined as in b);
- d)  $\text{O}(\text{CH}_2)_j\text{R}^{24}$ ,  $\text{O}(\text{CH}_2)_j\text{-O-R}^{24}$ , or  $\text{O}(\text{CH}_2)_j\text{-S-R}^{24}$ , wherein j is an integer from 1 to 8, and  $\text{R}^{24}$  is selected from the group consisting of H, substituted or unsubstituted C(1-8) alkyl, substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl;
- e)  $\text{S}(\text{CH}_2)_j\text{R}^{24}$ ,  $\text{S}(\text{CH}_2)_j\text{-O-R}^{24}$ , or  $\text{S}(\text{CH}_2)_j\text{-S-R}^{24}$ , wherein j and  $\text{R}^{24}$  are defined as in d);
- f)  $\text{C}\equiv\text{C-R}^{25}$ ,  $\text{C}\equiv\text{C-OR}^{25}$ , or  $\text{C}\equiv\text{C-CO}_2\text{R}^{25}$ , wherein  $\text{R}^{25}$  is H, substituted or unsubstituted C(1-8) alkyl, aryl, substituted aryl, heteroaryl, or substituted heteroaryl;
- g)  $\text{CH=CH-R}^{25}$ ,  $\text{CH=CH-OR}^{25}$ , or  $\text{CH=CH-CO}_2\text{R}^{25}$ , having a stereochemistry of E or Z, and  $\text{R}^{25}$  is defined as in f);
- h)  $\text{C}\equiv\text{C-NR}^{25}\text{R}^{26}$  or  $\text{C}\equiv\text{CCONR}^{25}\text{R}^{26}$ , wherein  $\text{R}^{25}$  is defined as in f), and  $\text{R}^{26}$  is defined as  $\text{R}^{25}$ , and  $\text{R}^{25}$  and  $\text{R}^{26}$  are selected independently;
- i)  $\text{CH=CH-NR}^{25}\text{R}^{26}$  or  $\text{CH=CHCONR}^{25}\text{R}^{26}$ , having a stereochemistry of E or Z, wherein  $\text{R}^{25}$  and  $\text{R}^{26}$  are independently defined as in h);
- j)  $(\text{CH}_2)_k\text{R}^{25}$ ,  $(\text{CH}_2)_k\text{-COOR}^{25}$ , or  $(\text{CH}_2)_k\text{-OR}^{25}$ , wherein k is an integer from 2 to 6 and  $\text{R}^{25}$  is defined as in f);
- k)  $(\text{CH}_2)_k\text{NR}^{25}\text{R}^{26}$ ,  $(\text{CH}_2)_k\text{CONR}^{25}\text{R}^{26}$ , wherein  $\text{R}^{25}$  and  $\text{R}^{26}$  are selected independently, and  $\text{R}^{25}$  and  $\text{R}^{26}$  are defined as  $\text{R}^{25}$  in f); and
- l)  $\text{CH}_2\text{XR}^{27}$ , wherein X is O or S and  $\text{R}^{27}$  is H, substituted or unsubstituted C(1-8) alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl;

$\text{R}^4$  is selected from the group consisting of:

- m) H, substituted or unsubstituted C(1-8) alkyl; and

n)



wherein  $X=O, S,$  or  $NH$ ,  $n=1$  to  $4$ ; and wherein  $R^{51}$  is  $H$ ;  $R^{52}$  and  $R^{53}$  are independently chosen from the group consisting of  $H$ , substituted or unsubstituted  $C(1-8)$ alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, or  $R^{51}$  and  $R^{52}$  are combined to form a heteroalkyl, substituted heteroalkyl, heteroaryl, or substituted heteroaryl ring system;

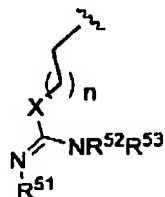
$R^5$  is selected from the group consisting of:

~~e) a lone pair when  $X^5$  is  $N$ ; or~~

~~when  $X^5$  is  $C$ ,  $R^5$  is selected from the group consisting of~~

p)  $H$ , substituted and unsubstituted  $C(1-8)$  alkyl; and

q)



wherein  $X=O, S,$  or  $NH$ ,  $n=1$  to  $4$ ; and wherein  $R^{51}$  is  $H$ ;  $R^{52}$  and  $R^{53}$  are independently chosen from the group consisting of  $H$ , substituted or unsubstituted  $C(1-8)$  alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, or  $R^{51}$  and  $R^{52}$  are combined to form a heteroalkyl, substituted heteroalkyl, heteroaryl, or substituted heteroaryl ring system; ~~or,~~

~~wherein when  $R^1 - R^3$  and  $R^5 - R^8$  are  $H$ , and  $R^4$  is  $H$  or  $CH_3$ , then at least one of  $X^1 - X^9$  represents a ring member other than carbon.~~

2. (previously presented) A compound, according to claim 1, in which  $X^1 - X^3$  are independently  $C$ .

3. (previously presented) A compound, according to claim 1, in which  $X^4$  is  $CH$ .

4. (previously presented) A compound, according to claim 1, in which  $X^6 - X^8$  are independently C.

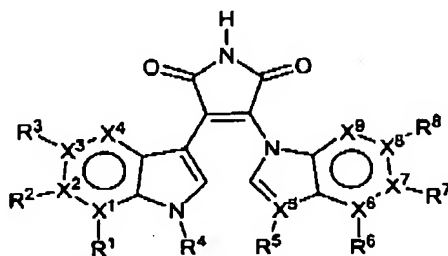
5. (currently amended) A compound, according to claim 1, in which  $X^9$  is CH or N.

6. (previously presented) A compound, according to claim 1, in which  $X^5$  is C,  $X^{10}$  is CH and the bond between  $X^5$  and  $X^{10}$  is a double bond.

7. (withdrawn) A compound, according to claim 1, in which  $X^5$  is N,  $R^5$  is a lone pair,  $X^{10}$  is CH and the bond between  $X^5$  and  $X^{10}$  is a double bond.

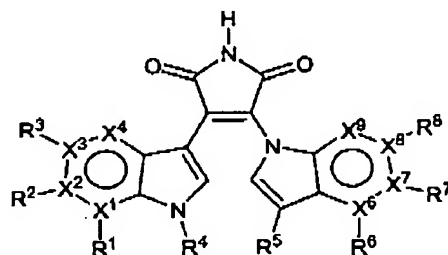
8. (previously presented) A compound, according to claim 1, in which  $X^5$  is CH,  $R^5$  is H,  $X^{10}$  is  $CH_2$  and the bond between  $X^5$  and  $X^{10}$  is a single bond.

9. (currently amended) A compound having the following formula:



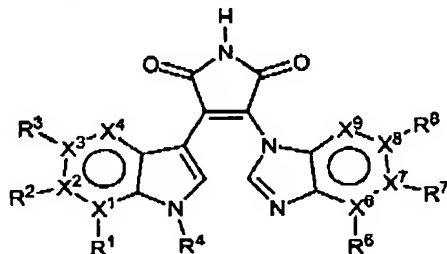
wherein  $X^5$  is C or N, and  $X^1 - X^3$ ,  $X^4$ ,  $X^6 - X^8$ ,  $R^1 - R^3$ ,  $R^4$ ,  $R^5$  and  $R^6 - R^8$  are as defined in claim 1.

10. (previously presented) A compound having the following formula:



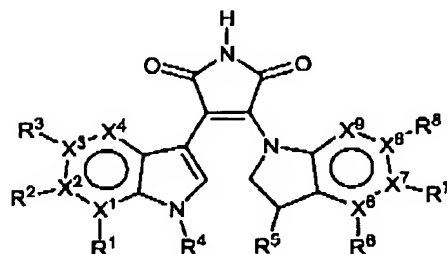
wherein  $X^1-X^3$ ,  $X^4$ ,  $X^6-X^8$ ,  $R^1-R^3$ ,  $R^4$ ,  $R^5$  and  $R^6-R^8$  are as defined in claim 1.

11. (withdrawn) A compound having the following formula:



wherein  $X^1-X^3$ ,  $X^4$ ,  $X^6-X^8$ ,  $R^1-R^3$ ,  $R^4$ ,  $R^5$  and  $R^6-R^8$  are as defined in claim 1.

12. (previously presented) A compound having the following formula:



wherein  $X^1-X^3$ ,  $X^4$ ,  $X^6-X^8$ ,  $R^1-R^3$ ,  $R^4$ ,  $R^5$  and  $R^6-R^8$  are as defined in claim 1.

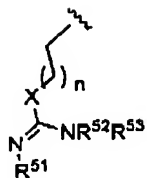
13. (previously presented) A compound, according to claim 1, in which when  $X^1$  -  $X^3$  or  $X^6$  -  $X^8$  is C, each respective  $R^1$  -  $R^3$  and  $R^6$  -  $R^8$  is independently selected from the group consisting of:

- H, halogen;
- $OR^{23}$ , wherein  $R^{23}$  is H, substituted or unsubstituted alkylcarbonyl, substituted or unsubstituted arylcarbonyl; and
- $O(CH_2)_j-R^{24}$ ,  $O(CH_2)_j-O-R^{24}$ , or  $O(CH_2)_j-S-R^{24}$ , wherein  $j$  is an integer from 1 to 8, and  $R^{24}$  is selected from the group consisting of H, substituted or unsubstituted C(1-8) alkyl, substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl.

14. (previously presented) A compound, according to claim 1, in which  $R^4$  is selected from the group consisting of:

- H, substituted or unsubstituted C(1-8) alkyl; and

n)

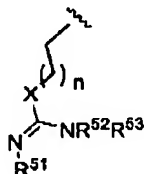


wherein  $X=O$ ,  $S$ , or  $NH$ ,  $n=2$ ; and wherein  $R^{51}$  is  $H$ ;  $R^{52}$  and  $R^{53}$  are independently chosen from the group consisting of  $H$ , substituted or unsubstituted  $C(1-8)$ alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, or  $R^{51}$  and  $R^{52}$  are combined to form a heteroalkyl, substituted heteroalkyl, heteroaryl, or substituted heteroaryl ring system.

15. (previously presented) A compound, according to claim 14, in which  $R^4$  is selected from the group consisting of:

m)  $H$ , substituted or unsubstituted  $C(1-8)$  alkyl; and

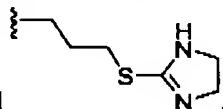
n)



wherein  $X=S$ ,  $n=2$ ; and wherein  $R^{51}$  is  $H$ ;  $R^{52}$  and  $R^{53}$  are both  $H$ , or  $R^{51}$  and  $R^{52}$  are combined to form a heteroaryl ring system.

16. (previously presented) A compound, according to claim 15, in which  $R^4$  is selected from the group consisting of:  $H$ , methyl,  $CH_2CH_2CH_2OH$ ,  $CH_2CH_2CH_2NH_2$ ,

$CH_2CH_2CH_2N_3$ ,  $CH_2CH_2CH_2SC(=NH)NH_2$  and

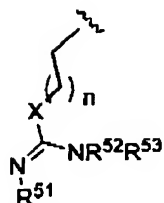


17. (withdrawn) A compound, according to claim 1, in which  $X^5$  is  $N$  and  $R^5$  is a lone pair.

18. (previously presented) A compound, according to claim 1, in which  $X^5$  is  $C$  or  $CH$ , and  $R^5$  is selected from the group consisting of:

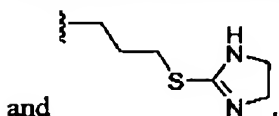
p)  $H$ , substituted and unsubstituted  $C(1-8)$  alkyl; and

q)

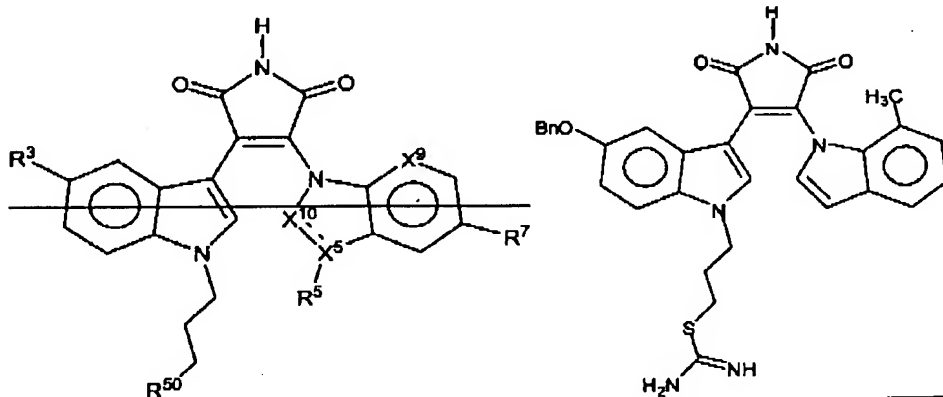


wherein  $X=S$ ,  $n=2$ ; and wherein  $R^{51}$  is H;  $R^{52}$  and  $R^{53}$  are independently chosen from the group consisting of H, substituted or unsubstituted C(1-8) alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, or  $R^{51}$  and  $R^{52}$  are combined to form a heteroalkyl, substituted heteroalkyl, heteroaryl, or substituted heteroaryl ring system.

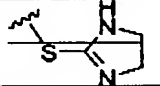
19. (previously presented) A compound, according to claim 18, in which  $X^5$  is C or CH, and  $R^5$  is selected from the group consisting of H, methyl,  $CH_2CH_2CH_2OH$ ,  $CH_2CH_2CH_2SC(=NH)NH_2$ ,  $CH_2CH_2CH_2N(CH_3)_2$ ,  $CH_2CH_2CH_2N_3$ ,  $CH_2CH_2CH_2NH_2$ ,



20. (currently amended) A compound, according to the following formula

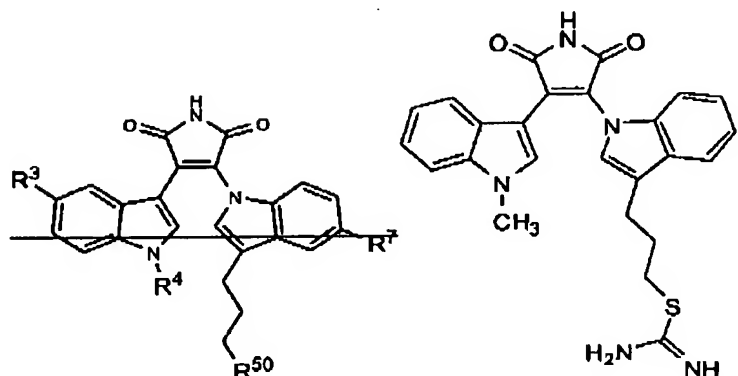


~~selected from the group consisting of:~~

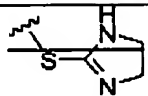
Cpd.	Bond between X <sup>5</sup> /X <sup>10</sup>	R <sup>3</sup>	R <sup>50</sup>	R <sup>7</sup>	X <sup>5</sup> /R <sup>5</sup>	X <sup>9</sup>	X <sup>10</sup>
124	Double	H	-OH	H	CH	CH	CH
124	Double	BnO	-OH	H	CH	CH	CH
125	Double	H	-OH	H	CMe	CH	CH
126	Double	H	-OH	BnO	CH	CH	CH
127	Double	H	-OH	H	CH	CH	CMe
128	Double	H	-OH	H	N	CH	CH
129	Double	BnO	-OH	H	CMe	CH	CH
130	Double	H	-OH	H	CH	N	CH
134	Double	BnO	-OH	H	CH	CH	CMe
132	Double	H	-OH	F	CH	CH	CH
133	Double	H	-N(CH <sub>3</sub> ) <sub>2</sub>	H	CH	CH	CH
136	Double	BnO	-N(CH <sub>3</sub> ) <sub>2</sub>	H	CH	CH	CH
137	Double	H	-N(CH <sub>3</sub> ) <sub>2</sub>	H	CMe	CH	CH
138	Double	H	-N(CH <sub>3</sub> ) <sub>2</sub>	BnO	CH	CH	CH
139	Double	H	-N(CH <sub>3</sub> ) <sub>2</sub>	H	CH	CH	CMe
140	Double	H	-N(CH <sub>3</sub> ) <sub>2</sub>	H	N	CH	CH
141	Double	BnO	-N(CH <sub>3</sub> ) <sub>2</sub>	H	CMe	CH	CH
142	Double	H	-N(CH <sub>3</sub> ) <sub>2</sub>	H	CH	N	CH
143	Double	H	-SC(=NH)NH <sub>2</sub>	H	CH	CH	CH
146	Double	H	-SC(=NH)NH <sub>2</sub>	H	CMe	CH	CH
147	Double	H	-SC(=NH)NH <sub>2</sub>	BnO	CH	CH	CH
148	Double	BnO	-SC(=NH)NH <sub>2</sub>	H	CH	CH	CH
149	Double	BnO	-SC(=NH)NH <sub>2</sub>	H	CH	CMe	CH
150	Double	BnO	-SC(=NH)NH <sub>2</sub>	H	CH	CH	CMe
151	Double	H	-SC(=NH)NH <sub>2</sub>	H	CH	CH	CMe
152	Double	H	-SC(=NH)NH <sub>2</sub>	H	CH	N	CH
153	Double	MeO	-SC(=NH)NH <sub>2</sub>	H	CH	CH	CH
154	Double	F	-SC(=NH)NH <sub>2</sub>	H	CH	CH	CH
155	Double	H	-SC(=NH)NH <sub>2</sub>	F	CH	CH	CH
156	Double	H		H	CH	CH	CH
159	Single	H	-SC(=NH)NH <sub>2</sub>	H	CH <sub>2</sub>	CH	CH <sub>2</sub>
160	Double	OCH <sub>2</sub> S Ph	-SC(=NH)NH <sub>2</sub>	H	CH	CH	CH
164	Double	H	-N <sub>3</sub>	H	CH	CH	CH
162	Double	H	-NH <sub>2</sub>	H	CH	CH	CH



21. (currently amended) A compound according to the following formula:



selected from the group consisting of:

Example	R <sup>3</sup>	R <sup>50</sup>	R <sup>2</sup>	R <sup>4</sup>	
163	H	OH	H	H	;
164	H	OH	H	Me	;
165	BnO	OH	H	H	;
166	H	SC(=NH)NH <sub>2</sub>	H	H	;
167	H	SC(=NH)NH <sub>2</sub>	H	Me	;
168	BnO	SC(=NH)NH <sub>2</sub>	H	Me	;
169	H	N(CH <sub>3</sub> ) <sub>2</sub>	H	Me	;
170	H		H	Me	;
171	H	N <sub>3</sub>	H	Me	; and
172	H	NH <sub>2</sub>	H	Me	.

22.(previously presented) A composition comprising a compound, according to claim 1, in combination with carrier.

23. (withdrawn) The composition, according to claim 22, further including a chemotherapeutic agent.

24. (withdrawn) The composition, according to claim 22, further including a cytokine.

25. (withdrawn) The composition, according to claim 22, further including anti-sense oligonucleotides.

26. (withdrawn) A method of treating an inflammatory disorder, the method comprising: administering to a subject in need thereof an effective amount of a compound or a composition, according to claim 1 or 22, so as to treat the disorder.

27. (withdrawn) A method of treating cancer, the method comprising: administering to a subject in need thereof an effective amount of a compound or a composition, according to claim 1 or 22, so as to treat the cancer.

28. (withdrawn) A method of treating a cell proliferative disorder, the method comprising: administering to a subject in need thereof an effective amount of a compound or a composition, according to claim 1 or 22, so as to treat the disorder.

29. (withdrawn) A method of treating cancer, the method comprising: administering to a subject in need thereof an effective amount of a compound or a composition, according to claim 1 or 22, in combination with another chemotherapeutic agent.

30. (withdrawn) Use of a compound or a composition, according to claim 1 or 22, so as to induce apoptosis in Jurkat cells.

31. (withdrawn) Use of a compound or a composition, according to claim 1 or 22, so as to induce apoptosis in cancer cell lines.

32. (withdrawn) The use, according to claim 31, in which the cancer cell lines are prostate cancer and breast cancer cell lines

33. (withdrawn) A method of treatment or prevention of a condition resulting from loss of growth and cellular differentiation control, the method comprising: administration to a subject in need thereof an effective amount of a compound or a composition, according to claim 1 or 22, so as to treat or prevent the condition.